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| 10/628,481 | 07/29/2003 | Tomi Kimpimaki | 1497-120 | 4680 |

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| EXAMINER |
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NUTTER, NATHAN M

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| ART UNIT | PAPER NUMBER |
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1711

DATE MAILED: 06/08/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/628,481

Applicant(s)

KIMPIMAKI ET AL.

Examiner

Nathan M. Nutter

Art Unit

1711

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 17-19, 21-49 and 51-74 is/are pending in the application.
- 4a) Of the above claim(s) 47-49 and 51-71 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 17-19, 21-46 and 72-74 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|--|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 17-19, 21-44, 46, 72 and 73 are rejected under 35 U.S.C. 103(a) as being unpatentable over Aho et al (WO 98/54410).

Aho et al disclose a coated board and a process for its manufacture. The board comprises at least one polymer-based coat, the coat being formed from a polymer dispersion in which talc particles at 30-80% by wt are added. Note claim 1 at page 20 (lines 1-7). The reference teaches the employment of "polymers suitable for the polymer basis" to include styrene-butadiene, styrene acrylate, acrylate or vinyl acetate polymers and copolymers at the paragraph bridging page 4 to page 5. The reference teaches the employment of modified starches, polylactides and other biopolymers, as recited in claim 19, at page 5 (lines 7-11). Modified starches would be a suggestion to include the graft copolymer as recited in claim 45. The reference also shows the use of sodium carboxymethyl cellulose at example 1 on page 11. Further, Aho et al teach the use of a hydrophobication agent at the paragraph bridging page 5 to page 6.

Aho et al do not specifically mention a size fraction and a pigment fraction. It would have been obvious to follow teachings of the Aho et al reference and arrive at instant composition (out of all the ingredients) into a few batches or fractions and then

Art Unit: 1711

combine these batches to get the final product in order to facilitate smooth handling, to reduce cost of production and to obtain the final product of desired properties.

Claim 45 is rejected under 35 U.S.C. 103(a) as being unpatentable over Aho et al (WO 98/54,410) as applied to claim 17 above, and further in view of Niinikoski et al (US 6,753,377).

The reference to Aho et al (WO 98/54,410) does not mention the graft copolymer recited in instant claim 45, but teaches the use of "modified starches," which would embrace the concept of a graft copolymer having a starch substrate.

The patent to Niinikoski et al (US 6,753,377) teaches the manufacture of a polymer dispersion, which contains a graft copolymer of starch with monomers.

It would have been obvious to use graft copolymer of Niinikoski et al in the manufacture of coating for board of Aho et al to impart enhanced reactivity as well as better retention and adhesion to board or paper.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

Art Unit: 1711

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 17-19, 21-46, 72 and 73 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 50-62 of copending Application No. 10/508,349. Although the conflicting claims are not identical, they are not patentably distinct from each other because the compositions produced from the method herein are essentially disclosed and claimed, as well as the method for manufacture, in the copending application.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claims 17-19, 21-46, 72 and 73 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-13 of U.S. Patent No. 6,545,079, newly cited. Although the conflicting claims are not identical, they are not patentably distinct from each other because although the compositions are taught by the reference for other purposes, the compositions produced would be identical, and are made using the same method as herein claimed.

Response to Arguments

Applicant argues that Aho et al provide no suggestion or teaching "to combine talc with a binder wherein the binder is a 'synthetic polymer and/or latex' and a sizing fraction comprised of a water-soluble principal component." Applicant's attention is

Art Unit: 1711

directed to Example 1 at page 11 wherein talc is combined with 4.1 g sodium polyacrylate and 16.2 g of sodium carboxymethyl cellulose. All elements are shown, only order of addition of constituents may differ. This is not deemed to lend patentability to the claims since the specific order of addition does not result in any special features arising due to a reaction of components. All components appear to be inert to one another chemically.

Further, applicant asserts that the secondary reference to Niinikoski et al does not suggest or disclose the "present invention - that is a method of surface sizing of paper." The present claims are NOT drawn to "a method of surface sizing of paper," but rather to a method of making a size. The reference to Niinikoski et al is deemed to be relevant.

With regard to applicants' arguments of 25 April 2006, with regard to the rejection claims 17-19, 21-44, 46, 72 and 73 are rejected under 35 U.S.C. 103(a) as being unpatentable over Aho et al (WO 98/54410), applicants rely on Example 1. Applicants assert:

"Example 1 of Aho shows a water soluble component (sodium carboxymethylcellulose) with makes up only about 0.38 wt. % of the total talc dispersion. The amount of the sodium polyacrylate (latex) makes up less than half the water soluble component. The latex and talc weight together about 63 wt. % of the total pigment fraction ($27009 + 8.2g/4312.4g = 62.8$ wt %). The sizing fraction makes up about 0.38 wt. % water soluble polymer. Thus the wt. ratios of pigment fraction to sizing fraction in example 1 of Aho is 62.8 to 0.38 or 165:1. This ratio of pigment fraction to sizing fraction is not encompassed by present claim 17 (10/90 to 90/10)."

Art Unit: 1711

The numbers applicants arrive at in their calculations are not factual since applicants do not perform the mathematics required to show the inclusion of "the ratio of the pigment fraction to the size fraction, calculated as dry matter, is 10/90 to 90/10." The reference shows the inclusion of:

8.2 g sodium polyacrylate (in total, added as 4.1 g twice)

16.2 g sodium carboxymethyl cellulose

2.4 g sodium hydroxide (part of the dry weight binder)

2700 g talc

2726.8 total SOLIDS of which 2700 g is talc. This ratio of 90/10 for the pigment to the sizing fraction is shown. The rejection was not made under 35 U.S.C. 102 as apparently argued by applicants. The ratio is within range that a skilled artisan would know to vary the constituents based upon many factors, including availability of components, packaging, etc. Applicants' calculations are erroneously based on the total weights of the dispersion, not on a dry basis, as they recite in claim 17. The water is not a part of such calculation. Example 2 is even more in line with the ratio recited, but is apparently ignored by applicants. Applicants are reminded that a reference is taken for the entirety of its teachings and not for any isolated teachings relied upon to assert patentability.

With regard to the rejection of claim 45 is rejected under 35 U.S.C. 103(a) as being unpatentable over Aho et al in view of Niinikoski et al, it is pointed out that the reference to Niinikoski et al is relied upon solely to show the inclusion of a starch graft copolymer. The reference to Aho et al suggests the inclusion of modified starches. To

Art Unit: 1711

include the grafted starch of Niinikoski et al would certainly be within the ordinary skill of an artisan in this art.

With regard to the provisional rejection of claims 17-19, 21-46, 72 and 73 on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 50-62 of copending Application No. 10/508,349, applicants failed to respond.

All grounds of rejection **MUST** be addressed in future correspondence else applicants will be held non-responsive.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

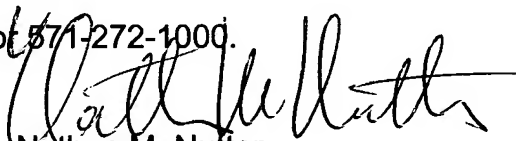
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nathan M. Nutter whose telephone number is 571-272-1076. The examiner can normally be reached on 9:30 a.m.-6:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James J. Seidleck can be reached on 571-272-1078. The fax phone

Art Unit: 1711

number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Nathan M. Nutter
Primary Examiner
Art Unit 1711

nmn

6 June 2006